REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-20 are presently pending in this application.

In the outstanding Office Action, Claims 1-3 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kubota et al. (U.S. Patent 5,807,440); Claims 1-8 and 11-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hiraishi et al. (U.S. Publication 2002/0027626) in view of Iijima (U.S. Patent 6,906,767) and in further view of Arai et al. (U.S. Patent 6,778,241); Claims 9 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hiraishi et al. in view of Iijima, Arai et al. and Kubota et al.; and Claims 18-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hiraishi et al. in view of Iijima, Arai et al. and Gunn et al. (U.S. Patent 6,665,027).

Briefly, Claim 1 is directed to a semitransparent reflector satisfying the following optical characteristics (1) and (2): (1) $10\% \leq T \leq 80\%$, $20\% \leq R \leq 90\%$, $80\% \leq (T + R) \leq 100\%$ (2) $8\% \leq (R-R_d) \leq 30\%$, wherein T indicates the whole light transmittance (%) of the reflector, R indicates the whole light reflectance (%) thereof, R_d indicates the whole light diffusion reflectance (%) thereof. This reflector having such optical characteristics realizes more efficient light transmission and reflection, and attains a higher transmittance and a higher reflectance of the display device, thereby significantly improving visibility of the device.[1]

The outstanding Office Action asserts that Claim 1 is obvious over Kubota et al. because "Kubota teaches a semitransparent reflector with transmitivity of 45 to 83%, reflectivity of 18-43%, and diffused reflectivity of 15 to 40% which leads to a R-Rd of 0 to 28% and T + R = 63 to 100% (see column 3 lines 43-55)." However, it is respectfully

---

[1] See Abstract.

submitted that <u>Kubota et al.</u> describes a diffuser layer having optical characteristics, R, Rd and T, and merely discusses an individual preferable range for each of R, Rd and T, without correlations therebetween such as the ranges for (R-Rd) and (T+R) as recited in Claim 1. As such, none of the devices presented in the embodiments of <u>Kubota et al.</u> satisfy the claimed ranges of (R-Rd) and (T + R). Specifically, all (R-Rd) values in Embodiments 1-3 are below the lower limit of the claimed range and all (T + R) values are above the upper limit of the claimed range as indicated below:

Embodiment 1: R-Rd = 30.9% - 25.0% = 5.9%

T + R = 72.4% + 30.9% = 103.3%

Embodiment 2: R-Rd = 28.3% - 24.1% = 4.2%

T + R = 78.5% + 28.3% = 106.8%

Embodiment 3: R-Rd = 30.7% - 26.8% = 3.9%

T + R = 76.3% + 30.7% = 107.0%

Therefore, all the devices described in the embodiments of <u>Kubota et al.</u> are believed to show extremely poor visibility, as discussed in Applicants' specification:

"If T is lower than 10 % and R is higher than 90 %, then it is unfavorable since the visibility through the reflector while the built-in light source is on is not good. If T is higher than 80 % and R is lower than 20 %, then it is unfavorable since the visibility through the reflector in the light is not good. <u>If $(R - R_d)$ is lower than 8 %, then it is unfavorable since the visibility of the display member is extremely poor;</u> and if $(R - R_d)$ is higher than 30 %, then it is also unfavorable since the display member may glare." (specification, page 7, lines 9-18, emphasis added)

<u>Kubota et al.</u> is silent of such a poor visibility due to the unfavorable (R-Rd) value and fails to teach or suggest how to improve the visibility. Furthermore, <u>Kubota et al.</u> does not teach or suggest how to prepare the claimed reflector satisfying 80 % ≤ (T + R) ≤ 100 % and 8 % ≤ $(R-R_d)$ ≤ 30 %. As described in Applicants' specification, page 3, lines 20-26, and page 14,

lines 15-23, the reflector can be prepared by incorporating a flaky inorganic fine powder and/or an organic filler into a base layer and then stretching the base layer biaxially in which the draw ratios in machine and transverse directions are controlled so that flaky pores having a structure like a true circle are formed in the base layer. However, Kubota et al. is silent of such stretching, and Kubota et al. does not teach or suggest the preparation method. In view of the above discussions, the semitransparent reflector of Claim 1 is believed to be distinguishable from Kubota et al.

Iijima is related to an LCD with a diffuser, but does not teach the semitransparent reflector satisfying the optical characteristics, "(2) 8 % ≤ $(R-R_d)$ ≤ 30 % wherein ... R indicates the whole light reflectance (%) thereof, R_d indicates the whole light diffusion reflectance (%) thereof," as recited in Claim 1. On the other hand, Iijima simply discusses an LCD having a light diffusion plate 170 and a light reflection plate 200, and shows in Table 1 the light diffusion plates 170 having haze values of 15, 24, 47, 82 and 95%. However, nowhere does Iijima discuss the (R) value or (R-Rd) value of the light diffusion plate 170. Therefore, the reflector of Claim 1 is believed to be clearly distinguishable from Iijima.

Arai et al. is directed to a substrate for liquid crystal display. Nevertheless, Arai et al. fails to teach the semitransparent reflector satisfying the optical characteristics, "(2) 8 % ≤ $(R-R_d)$ ≤ 30 % wherein ... R indicates the whole light reflectance (%) thereof, R_d indicates the whole light diffusion reflectance (%) thereof," as recited in Claim 1. Specifically, Arai et al. only describes a laminated structure of a liquid crystal element including multiple transparent films, and fails to discuss optical characteristics such as (Rd) or (R-Rd) of these transparent films. Claim 1 is thus believed to be clearly distinguishable from Arai et al.

Hiraishi et al. is concerned with laminated films, but does not teach the semitransparent reflector satisfying the optical characteristics as recited in Claim 1. On the

4

other hand, Hiraishi et al. merely describes a laminated film 10 having transparent resin

layers 12 and 13 and a light-scattering layer 11 as illustrated in Fig. 1. Nowhere does

Hiraishi et al. teach or suggest the claimed ranges of T, R and Rd, as stated at page 3 of the

Office Action. Hence, Claim 1 is believed to be clearly distinguishable from Hiraishi et al.

Because none of Iijima, Arai et al. and Hiraishi et al. discloses the subject matter as

recited in Claim 1, even the combined teachings of these cited references are not believed to

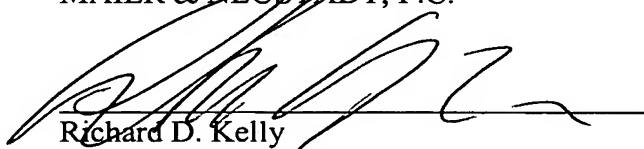render the reflector recited in Claim 1 obvious.

Likewise, independent Claims 2 and 3 include subject matter substantially similar to

what is recited in Claim 1 to the extent discussed above. Thus, Claims 2 and 3 are also

distinguishable from Kubota et al., Hiraishi et al., Iijima and Arai et al.

For the foregoing reasons, Claims 1-3 are believed to be allowable. Furthermore,

since Claims 4-20 depend ultimately from one of Claims 1-3, substantially the same

arguments set forth above also apply to these dependent claims. Hence, Claims 4-20 are

believed to be allowable as well.

In view of the discussions presented above, Applicants respectfully submit that the

present application is in condition for allowance, and an early action favorable to that effect is

earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Richard D. Kelly
Attorney of Record
Registration No. 27,757

Akihiro Yamazaki
Registration No. 46,155

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

RDK/AY/YO/mda
I:\ATTY\YO\25s\251237\251237US_AME 2.DOC